CLAIMS

1. A method, comprising steps of:

(a) identifying an average foot contact time of a user during a first outing;

(b) identifying an average pace of the user during the first outing;

(c) defining a relationship between foot contact times of the user and corresponding paces of the user, wherein the relationship is based upon the average foot contact time and the average pace identified during the first outing, and wherein no other average foot contact times and no other average paces identified during any different outings by the user are used to define the relationship; and

(d) calibrating at least one device that monitors activity of the user in locomotion on foot based upon the defined relationship between foot contact times of the user and corresponding paces of the user.

2. The method of claim 1, further comprising steps of:

(e) determining at least one foot contact time of the user during a second outing; and

(f) calculating a pace of the user during the second outing by including the determined at least one foot contact time in an equation defining the relationship between foot contact times of the user and corresponding paces of the user.

3. The method of claim 1, further comprising steps of:

(e) determining a plurality of foot contact times of the user during a second outing; and

(f) calculating a distance traveled by the user during the second outing based upon the determined plurality of foot contact times and the relationship between foot contact times of the user and corresponding paces of the user.

4. The method of claim 1, wherein:

the step (a) includes steps of (a1) determining a plurality of foot contact times during the first outing, and (a2) calculating the average foot contact time of the user during the first outing based upon the plurality of determined foot contact times; and

the step (b) includes steps of (b1) determining an amount of time that elapsed during the first outing, and (b) calculating the average pace of the user during the first outing based upon the amount of time that elapsed during the outing and the distance traveled during the outing.

5. The method of claim 1, wherein the step (c) includes a step of:

(c1) identifying a single user-specific calibration constant that defines the relationship between foot contact times of the user and corresponding paces of the user, wherein no other user-specific calibration constants are used to define the relationship.

6. The method of claim 1, wherein the step (c) includes steps of:

(c1) on a graph having foot contact times of the user on a first coordinate axis and paces of the user on a second coordinate axis, determining a location of a first point particular to the user;

(c2) identifying a second point on the graph independent of the user; and

(c3) based upon locations of the first and second points on the graph, defining the relationship between foot contact times of the user and corresponding paces of the user by defining a curve on the graph that intercepts both of the first and second points.

7. The method of claim 6, wherein the step (c3) includes a step of defining the relationship between foot contact times of the user and corresponding paces of the user by defining a line on the graph that intercepts both of the first and second points.

8. The method of claim 7, wherein the coordinate of the second point on the second coordinate axis is zero.

9. A method, comprising steps of:

(a) determining a single user-specific calibration constant that defines a relationship between foot contact times of a user and corresponding paces of the user, wherein no other user-specific calibration constants are used to define the relationship; and

(b) calibrating at least one device that monitors activity of the user in locomotion on foot based upon the relationship between foot contact times of the user and corresponding paces of the user that is defined by the single user-specific calibration constant.

10. The method of claim 9, further comprising steps of:

(c) determining at least one foot contact time of the user during an outing; and

(d) calculating a pace of the user during the outing by including the determined at least one foot contact time in an equation defining the relationship between foot contact times of the user and corresponding paces of the user.

11. The method of claim 9, further comprising steps of:

(e) determining a plurality of foot contact times of the user during an outing; and

(f) calculating a distance traveled by the user during the outing based upon the determined plurality of foot contact times and the relationship between foot contact times of the user and corresponding paces of the user.

12. A method, a comprising steps of:

(a) on a graph having foot contact times of a user on a first coordinate axis and paces of the user on a second coordinate axis, determining a location of a first point particular to the user;

(b) identifying a second point on the graph independent of the user;

(c) based upon locations of the first and second points on the graph, defining a curve on the graph that intercepts both of the first and second points; and

(d) calibrating at least one device that monitors activity of the user in locomotion on foot based upon the defined curve.

13. The method of claim 12, wherein the step (c) includes a step of:

(c1) defining the curve as a line on the graph that intercepts both the first and second points.

14. The method of claim 12, further comprising steps of:

(e) determining at least one foot contact time of the user during an outing; and

(f) calculating a pace of the user during the outing by including the determined at least one foot contact time in an equation defining the curve.

15. The method of claim 12, further comprising steps of:

(e) determining a plurality of foot contact times of the user during an outing; and

(f) calculating a distance traveled by the user during the outing by including the determined plurality of foot contact times in an equation defining the curve.

16. The method of claim 12, wherein the step (c) includes a step of:

(c1) determining a single user-specific calibration constant that identifies a location of the first point on the graph, wherein no other user-specific calibration constants are used to identify the location of the first point on the graph.

17. The method of claim 12, wherein the coordinate of the second point on the second coordinate axis is zero.

18. A method, comprising steps of:

(a) based upon a first relationship between foot contact times of a user and corresponding paces of the user, defining a second relationship between inverse values of foot contact times of the user and corresponding speeds of the user; and

(b) calibrating at least one device that monitors activity of the user in locomotion on foot based upon the second relationship.

19. The method of claim 18, further comprising steps of:

(c) determining at least one foot contact time of the user during an outing; and

(d) calculating a pace of the user during the outing by including the determined at least one foot contact time in an equation defining the second relationship.

20. The method of claim 18, further comprising steps of:

(c) determining a plurality of foot contact times of the user during an outing; and

(d) calculating a distance traveled by the user during the outing based upon the determined plurality of foot contact times and the second relationship.

21. A method, comprising a step of:

(a) determining a speed of a user in locomotion on foot by including at least one determined foot contact time in an equation defining a relationship between inverse values of foot contact times of the user and corresponding speeds of the user.

22. The method of claim 21, wherein:

the method further includes a step of (b) determining a plurality of foot contact times of the user;

the method further includes a step of (c) calculating an average foot contact time of the user based upon the plurality of foot contact times; and

the step (a) includes a step of (a1) determining an average speed of the user by using the determined average foot contact time as the at least one determined foot contact time in the equation.

23. The method of claim 21, further comprising a step of:

(b) determining a distance traveled by the user based upon the determined speed of the user.

24. The method of claim 21, wherein the equation defines a linear relationship between inverse values of foot contact times of the user and corresponding speeds of the user.

25. A method, comprising steps of:

(a) based upon a first relationship between inverse values of foot contact times of a user and corresponding speeds of the user, defining a second relationship between foot contact times of the user and corresponding paces of the user; and

(b) calibrating at least one device that monitors activity of the user in locomotion on foot based upon the second relationship.

26. The method of claim 25, further comprising steps of:

(c) determining at least one foot contact time of the user during an outing; and

(d) calculating a pace of the user during the outing by including the determined at least one foot contact time in an equation defining the second relationship.

27. The method of claim 25, further comprising steps of:

(c) determining a plurality of foot contact times of the user during an outing; and

(d) calculating a distance traveled by the user during the outing based upon the determined plurality of foot contact times and the second relationship.

28. A method, comprising steps of:

(a) identifying an average foot contact time of a user during a first outing;

(b) identifying an average speed of the user during the first outing;

(c) defining a relationship between inverse values of foot contact times of the user and corresponding speeds of the user, wherein the relationship is based upon the average foot contact time and the average speed identified during the first outing; and

(d) calibrating at least one device that monitors activity of the user in locomotion on foot based upon the defined relationship between inverse values of foot contact times of the user and corresponding speeds of the user.

29. The method of claim 28, wherein no other average foot contact times and no other average speeds identified during any different outings by the user are used to define the relationship.

30. The method of claim 28, further comprising steps of:

(e) determining at least one foot contact time of the user during a second outing; and

(f) calculating a speed of the user during the second outing by including the determined at least one foot contact time in an equation defining the relationship between inverse values of foot contact times of the user and corresponding speeds of the user.

31. The method of claim 28, further comprising steps of:

(e) determining a plurality of foot contact times of the user during a second outing; and

(f) calculating a distance traveled by the user during the second outing based upon the determined plurality of foot contact times and the relationship between inverse values of foot contact times of the user and corresponding speeds of the user.

32. The method of claim 28, wherein:

the step (a) includes steps of (a1) determining a plurality of foot contact times during the first outing, and (a2) calculating the average foot contact time of the user during the first outing based upon the plurality of determined foot contact times; and

the step (b) includes steps of (b1) determining an amount of time that elapsed during the first outing, and (b) calculating the average speed of the user during the first outing based upon the amount of time that elapsed during the outing and the distance traveled during the outing.

33. The method of claim 28, wherein the step (c) includes a step of:

(c1) identifying a single user-specific calibration constant that defines the relationship between inverse values of foot contact times of the user and corresponding speeds of the user, wherein no other user-specific calibration constants are used to define the relationship.

34. A method, comprising steps of:

(a) determining a single user-specific calibration constant that defines a relationship between inverse values of foot contact times of a user and corresponding speeds of the user, wherein no other user-specific calibration constants are used to define the relationship; and

(b) calibrating at least one device that monitors activity of the user in locomotion on foot based upon the relationship between inverse values of foot contact times of the user and corresponding speeds of the user that is defined by the single user-specific calibration constant.

35. The method of claim 34, further comprising steps of:

(c) determining at least one foot contact time of the user during an outing; and

(d) calculating a speed of the user during the outing by including the determined at least one foot contact time in an equation defining the relationship between inverse values of foot contact times of the user and corresponding speeds of the user.

36. The method of claim 34, further comprising steps of:

(e) determining a plurality of foot contact times of the user during an outing; and

(f) calculating a distance traveled by the user during the outing based upon the determined plurality of foot contact times and the relationship between inverse values of foot contact times of the user and corresponding speeds of the user.

37. A system, comprising:

at least one processor configured to define a relationship between foot contact times of a user and corresponding paces of the user, wherein the relationship is based upon an average foot contact time and an average pace identified during a first outing, and wherein no other average foot contact times and no other average paces identified during any different outings by the user are used to define the relationship, the at least one processor being further configured to calculate at least one of a pace of the user and a distance traveled by the user during a second outing based upon at least one foot contact time determined during the second outing and the defined relationship between foot contact times of the user and corresponding paces of the user.

38. The system of claim 37, wherein the at least one processor is further configured to use a single user-specific calibration constant to define the relationship between foot contact times of the user and corresponding paces of the user without any other user-specific calibration constants being used to define the relationship.

39. The system of claim 37, wherein the at least one processor is further configured to, on a graph having foot contact times of the user on a first coordinate axis and paces of the user on a second coordinate axis, determine a location of a first point particular to the user, to identify a second point on the graph independent of the user, and to, based upon locations of the first and second points on the graph, define the relationship between foot

contact times of the user and corresponding paces of the user by defining a curve on the graph that intercepts both of the first and second points.

40. The system of claim 39, wherein the at least one processor is further configured to define the relationship between foot contact times of the user and corresponding paces of the user by defining a line on the graph that intercepts both of the first and second points.

41. The system of claim 40, wherein the coordinate of the second point on the second coordinate axis is zero.

42. A system, comprising:

at least one processor configured to use a single user-specific calibration constant to define a relationship between foot contact times of a user and corresponding paces of the user without any other user-specific calibration constants being used to define the relationship, the at least one processor being further configured to calculate at least one of a pace of the user and a distance traveled by the user during an outing based upon at least one foot contact time determined during the outing and the defined relationship between foot contact times of the user and corresponding paces of the user.

43. A system, comprising:

at least one processor configured to, on a graph having foot contact times of a user on a first coordinate axis and paces of the user on a second coordinate axis, determine a location of a first point particular to the user, to identify a second point on the graph independent of the user, and to, based upon locations of the first and second points on the graph, define a curve on the graph that intercepts both of the first and second points, the at least one processor being further configured to calculate at least one of a pace of the user and a distance traveled by the user during an outing based upon at least one foot contact time determined during the outing and the defined curve.

44. The system of claim 43, wherein the at least one processor is further configured to define the curve as a line on the graph that intercepts both the first and second points.

45. The system of claim 43, wherein the at least one processor is further configured to use a single user-specific calibration constant to identify a location of the first point on the graph without using any other user-specific calibration constants to identify the location of the first point on the graph.

46. The system of claim 43, wherein the coordinate of the second point on the second coordinate axis is zero.

47. A system, comprising:

at least one processor configured to, based upon a first relationship between foot contact times of a user and corresponding paces of the user, define a second relationship between inverse values of foot contact times of the user and corresponding speeds of the user, the at least one processor being further configured to calculate at least one of a speed of the user and a distance traveled by the user during an outing based upon at least one foot contact time determined during the outing and the second relation ship.

48. A system, comprising:

at least one processor configured to, determine a speed of a user in locomotion on foot by including at least one determined foot contact time in an equation defining a relationship between inverse values of foot contact times of the user and corresponding speeds of the user.

49. The system of claim 48, wherein the at least one processor is further configured to determine a distance traveled by the user based upon the determined speed of the user.

50. The system of claim 48, wherein the equation defines a linear relationship between the inverse values of foot contact times of the user and corresponding speeds of the user.

51. A system, comprising

at least one processor configured to, based upon a first relationship between inverse values of foot contact times of a user and corresponding speeds of the user, define a second relationship between foot contact times of the user and corresponding paces of the user, the at least one processor being further configured to calculate at least one of a speed of the user and a distance traveled by the user during an outing based upon at least one foot contact time determined during the outing and the second relationship.

52. A system, comprising

at least one processor configured to define a relationship between inverse values of foot contact times of a user and corresponding speeds of the user based upon an average foot contact time and an average speed determined during a first outing, the at least one processor being further configured to calculate at least one of a speed of the user and a distance traveled by the user during a second outing based upon at least one foot contact time determined during the second outing and the defined relationship.

53. The system of claim 52, wherein the at least one processor is further configured such that no other average foot contact times and no other average speeds identified during any different outings by the user are used to define the relationship.

54. The system of claim 52, wherein the at least one processor is further configured to use a single user-specific calibration constant to define the relationship between inverse values of foot contact times of the user and corresponding speeds of the user without using any other user-specific calibration constants to define the relationship.

55. A system, comprising:

at least one processor configured to use a single user-specific calibration constant to define a relationship between inverse values of foot contact times of a user and corresponding speeds of the user without using any other user-specific calibration constants to define the relationship, the at least one processor being further configured to calculate at least one of a speed of the user and a distance traveled by the user during an outing based upon at least one

foot contact time determined during the outing and the relationship between inverse values of foot contact times of the user and corresponding speeds of the user that is defined by the single user-specific calibration constant.

56. A system, comprising:

means for defining a relationship between foot contact times of the user and corresponding paces of the user, wherein the relationship is based upon an average foot contact time and an average pace identified during a first outing, and wherein no other average foot contact times and no other average paces identified during any different outings by the user are used to define the relationship; and

means for calculating at least one of a pace of the user and a distance traveled by the user during a second outing based upon at least one foot contact time determined during the second outing and the defined relationship between foot contact times of the user and corresponding paces of the user.

57. A system, comprising:

means for using a single user-specific calibration constant to define a relationship between foot contact times of a user and corresponding paces of the user, wherein no other user-specific calibration constants are used to define the relationship; and

means for calculating at least one of a pace of the user and a distance traveled by the user during an outing based upon at least one foot contact time determined during the outing and the defined relationship between foot contact times of the user and corresponding paces of the user.

58. A system, comprising:

means for, based upon a first relationship between foot contact times of a user and corresponding paces of the user, defining a second relationship between inverse values of foot contact times of the user and corresponding speeds of the user; and

means for calculating at least one of a speed of the user and a distance traveled by the user during an outing based upon at least one foot contact time determined during the outing and the second relationship.

59. A system, comprising:

means for determining at least on foot contact time of a user; and

means for determining a speed of the user by including the at least one foot contact time in an equation defining a relationship between inverse values of foot contact times of the user and corresponding speeds of the user.

60. A system, comprising:

means for, based upon a first relationship between inverse values of foot contact times of a user and corresponding speeds of the user, defining a second relationship between foot contact times of the user and corresponding paces of the user; and

means for calculating at least one of a pace of the user and a distance traveled by the user during an outing based upon at least one foot contact time determined during the outing and the second relationship.

61. A system, comprising:

means for defining a relationship between inverse values of foot contact times of the user and corresponding speeds of the user, wherein the relationship is based upon an average foot contact time and an average speed identified during a first outing; and

means for calculating at least one of a speed of the user and a distance traveled by the user during a second outing based upon at least one foot contact time determined during the second outing and the relationship between inverse values of foot contact times of the user and corresponding speeds of the user.

62. A system, comprising:

means for using a single user-specific calibration constant to define a relationship between inverse values of foot contact times of a user and corresponding speeds of the user, wherein no other user-specific calibration constants are used to define the relationship; and

means for calculating at least one of a speed of the user and a distance traveled by the user during an outing based upon at least one foot contact time determined during the outing and the relationship between inverse values of foot contact times of the user and corresponding speeds of the user that is defined by the single user-specific calibration constant.